TMS Accessory All Weather Mats Installation Review

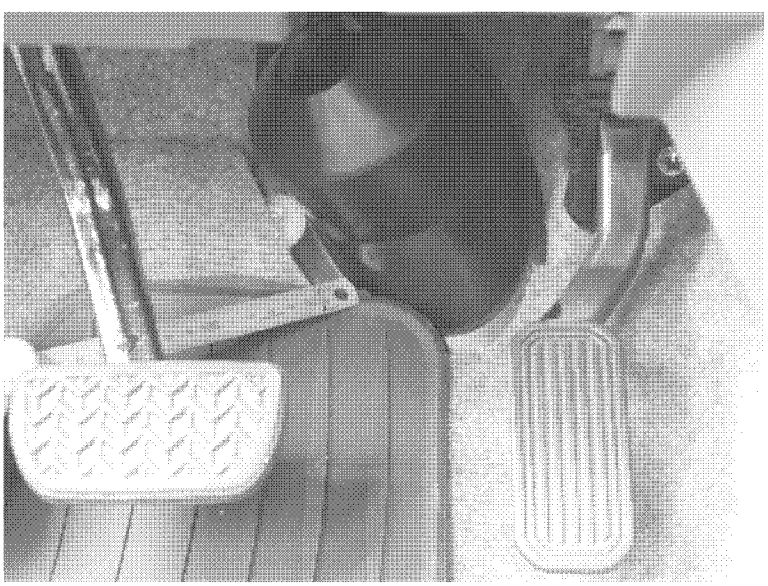
Background:
CAD was informed of customer complaints for the Toyota/Lexus Genuine All Weather Mats (AWM). CAD was advised that the AWM may interfere with the accelerator pedal in some models. CAD was also advised that Avalon and Prius may not have the condition.

Product Review:
CAD installed the AWM in both the Avalon and Prius to evaluate if the reported condition could be duplicated.

Inspection Process:
The AWM was installed in the vehicle using the attachment clips as designed. In all cases if the mat was installed correctly it was not possible to create interference with the accelerator pedal.

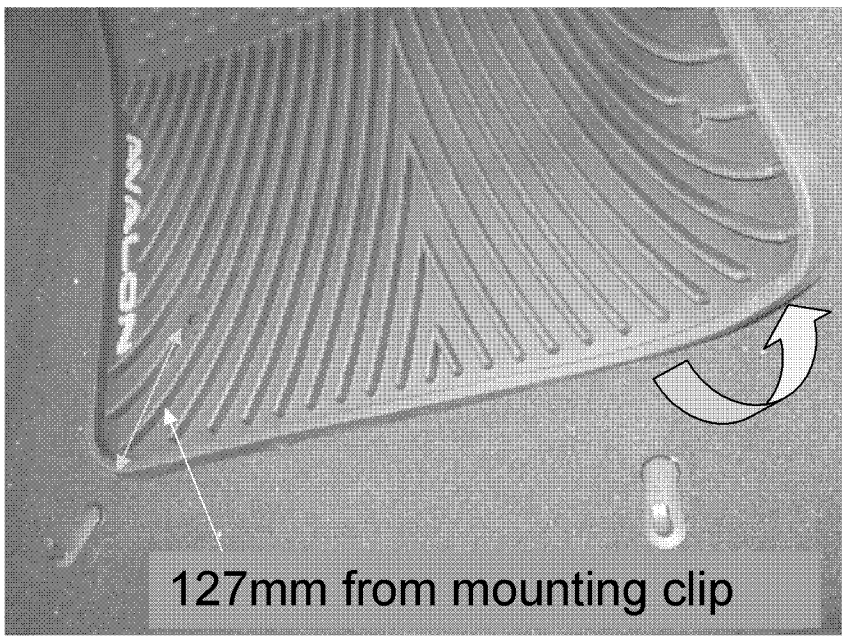
PRIUS:
In the properly installed position with the mat secured by the retention clips it was not possible to interfere with the Accelerator Pedal. The mat distance to the accelerator pedal was measured to be 45mm.

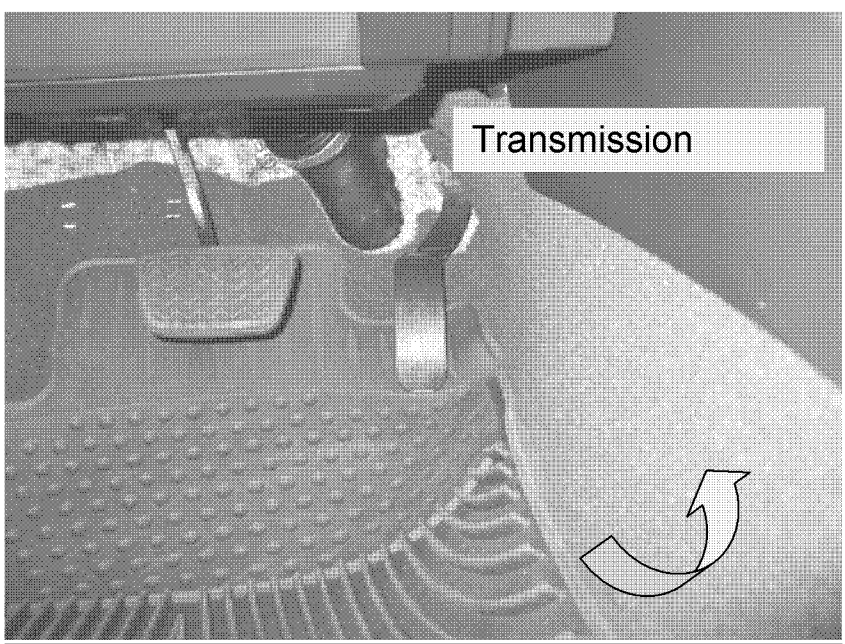
The mat was then detached from the clips to try and duplicate the interference condition. With the mat in the loose condition it was found that the steering column would block the mat from moving into a position of interference. This check was repeated with the AWM placed on top of the carpeted mat. Again the steering column prevented the mat from moving to a position of interference. The mat distance to the accelerator pedal was measured in this condition and found to be 30mm.



Avalon:
In the properly installed position with the mat secured by the retention clips it was not possible to interfere with the Accelerator Pedal. The mat distance to the accelerator pedal was measured to be 45mm.

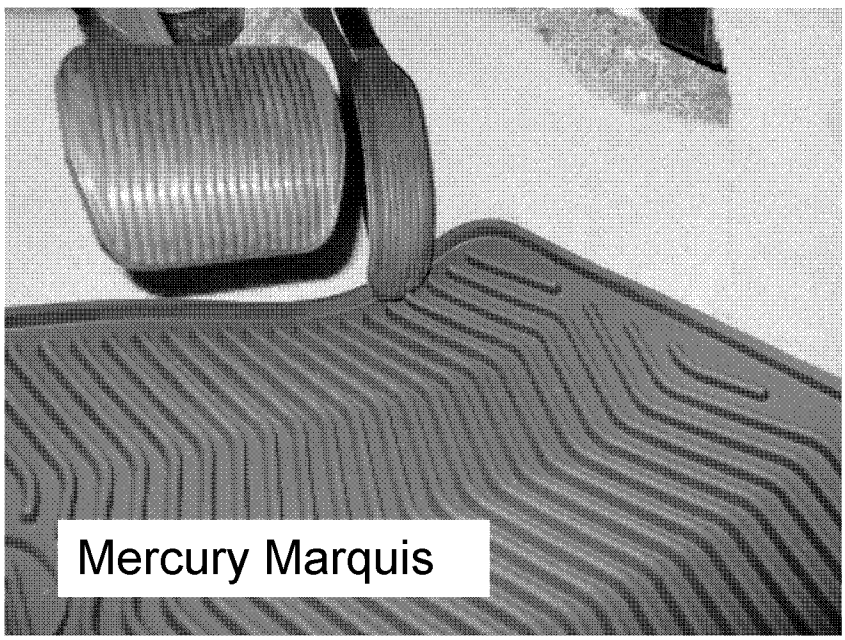
The mat was then detached from the clips to try and duplicate the interference condition. With the mat in the loose condition it was possible to impede the pedal, but pedal lock up did not occur. This was confirmed both with and without the carpeted mat installed. The pedal lock condition could only be obtained by rotating the mat far up the transmission tunnel. In this position the mounting hole for the mat was 127mm away from its design location.

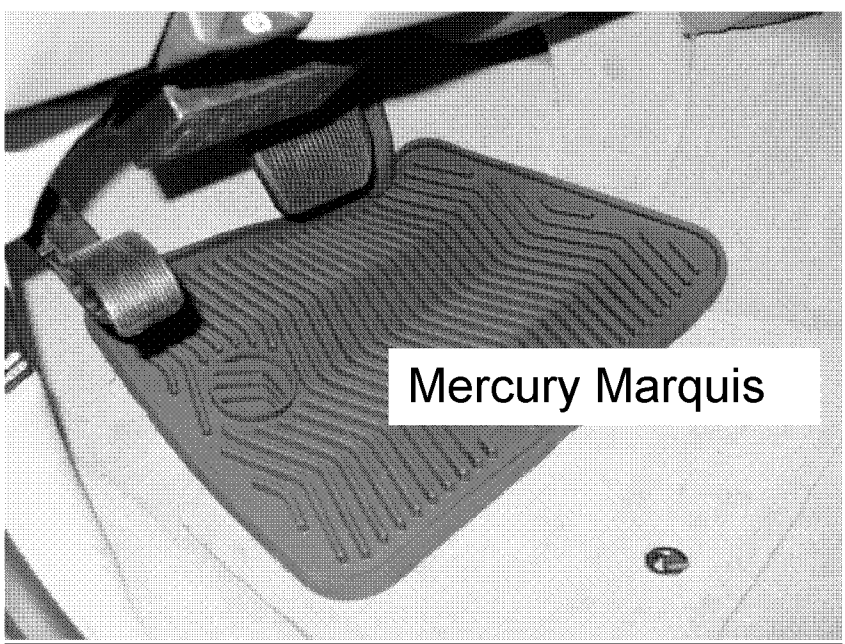




Mercury Marquis:
The Mercury Marquis uses a much smaller size mat than the Toyota models. If the mat is clipped in place then interference cannot occur.

The Marquis was observed to have 10mm clearance from the pedal to the vehicle carpet but the AWM still caused the pedal to lock. The Marquis mat was tested in two different directions and both direction caused the pedal to lock.





Contributing factors:

- If the floor mats are not clipped in as designed then interference is possible with the Genuine Mats.
- Aftermarket mats were also able to cause interference with the accelerator pedal. The aftermarket mats do not always have mounting holes to attach the mats.
- The accelerator pedal in the Toyota vehicles can contact the carpet allowing the opportunity for an unclipped mat to lock the pedal into position. It was noted that multiple models had a similar design where the top hinged pedal could be locked into the on position. Other models have a floor mounted hinge which would not allow the pedal to lock in place.
- Competitors vehicles also had top mounted hinges and could have the lock up condition. One vehicle was observed to have 10mm clearance to the carpet but the AWM still caused the pedal to lock.